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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,687	12/17/2003	Takeru Okada	107156-00212	4092

7590 02/07/2006

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EXAMINER

RJELLEY, ELIZABETH A

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

58

Office Action Summary	Application No. 10/736,687	Applicant(s) OKADA ET AL.	
	Examiner Elizabeth A. Rielley	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-15 is/are rejected.
- 7) ☒ Claim(s) 2, 16, 17 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 18-21 and 23-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/22/05.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 6-8, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bachmann et al (US 20020003407).

In regard to claim 1, Bachmann et al ('407) teaches a plasma display panel having discharge-gas-filled discharge cells (figure 1; paragraphs 15 and 16) each of which includes a phosphor layer formed therein (9) and is formed between two substrates (2 and 3), and producing a display discharge between paired display electrodes (6 and 7) and an addressing discharge between one of the paired display electrodes and an addressing electrode in each discharge cell (10; see figure 1), comprising: a diamond-containing layer made of an insulation material containing diamond (5; paragraph 19), and formed in a position where the addressing discharge is produced between the one of the paired display electrodes and the addressing electrode in the discharge cell (see figure 1).

In regard to claim 3, Bachmann et al ('407) teaches the insulation material (5; paragraph 15) forming said diamond-containing layer is an insulation material different from a phosphor material forming the phosphor layer (9; paragraph 16).

In regard to claims 6-8, 13 and 14, Applicant's recitation of the diamond is terminated by hydrogen; the diamond undergoes one of a hydrogen annealing process and a hydrogen plasma annealing process for hydrogen termination; the diamond is synthesized at high pressure, or alternatively synthesized by use of implosion techniques; the diamond-containing layer includes diamond deposited by use of a Chemical Vapor Deposition process; and the diamond-containing layer is formed by use of one of a screen printing method, an ink jetting method, a nozzle discharging method and a spin coating method, the Examiner notes that the recitation is considered a product by process limitation. The patentability of the claim resides on the final product and not the process by which is manufactured. Accordingly, Bachmann et al ('407) teachings of a diamond-containing layer made of an insulating material containing diamonds is considered to meet the claimed recitation.

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In regard to claim 15, Bachmann et al ('407) teaches the addressing electrode is set as a negative pole to produce the addressing discharge (paragraph 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al (US 20020003407) in view of Jin et al (US 5982095).

In regard to claims 4 and 5, Bachmann et al ('407) disclose all the limitations set forth, as described above, except the diamond included in said diamond-containing layer is in powder form and the particle size of the diamond powder ranges from 0.1 μm to 3 μm . Jin et al ('095) teach a diamond layer in a PDP including diamond powder, the particles size of the diamond powder ranges from 0.1 μm to 3 μm (column 3 line 45 to column 4 line 26) in order to reduce the operating voltage of the display (abstract). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the PDP of Bachmann et al ('407) with the diamond powder of Jin et al ('095). Motivation to combine would be to reduce the operating voltage of the display.

In regard to claims 9 and 10, Bachmann et al ('407) disclose all the limitations set forth, as described above, except the diamond includes impurities and the impurities are ones selected from the

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group of phosphorus, nitrogen, and boron. Jin et al ('095) teach that the diamond includes impurities and the impurities are ones selected from the group of phosphorus, nitrogen, and boron (column 4 lines 56-58) in order to improve the conductance of the layer (column 4 lines 46-58; abstract). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the PDP of Bachmann et al ('407) with the diamond impurities of Jin et al ('095). Motivation to combine would be to improve the conductance of the layer.

In regard to claims 11 and 12, Bachmann et al ('407) disclose all the limitations set forth, as described above, except the discharge gas includes a hydrogen gas and a concentration of the hydrogen gas in the discharge gas is equal to or less than four percentages. Jin et al ('095) teach the discharge gas includes a hydrogen gas and a concentration of the hydrogen gas in the discharge gas is equal to or less than four percentages (column 8 lines 43-48) in order to minimize graphitization (column 8 lines 43-48). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the PDP of Bachmann et al ('407) with the gas of Jin et al ('095). Motivation to combine would be minimize graphitization.

Allowable Subject Matter

Claims 2, 16, 17, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

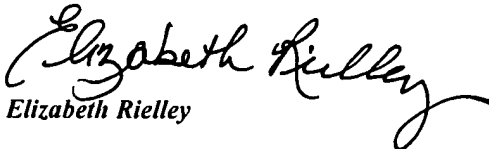
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Conclusion

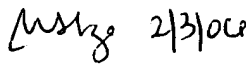
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Elizabeth Rielley

Examiner
Art Unit 2879

 2/3/08
MARICELI SANTIAGO
PRIMARY EXAMINER